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INFORMATION REPORT
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SUBJECT Development of High-Speed Cathode Ray
Oscillograph at the Oberspreewerk

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1. The device [redacted] a phosphoroscope for the determination of the decay time of phosphorus. [redacted] 25X1
[redacted] the device was of little value because it was constructed for an impossibly large frequency range upon Russian insistence; in addition, it was damaged in the course of its air transportation to Moscow.
2. The only time-measuring devices which are now developed and constructed in the Oberspreewerk are cathode ray oscillographs, if one chooses to apply the notion of time-measuring devices to them. Specifically, no time-measuring device to be used in connection with a detonating mechanism is under construction there. [redacted] the cathode ray oscillograph described below could be used for such a purpose; if so, the Russians did not give any hint of such a use to any person in the Research and Development Division of the plant.
3. The main assignment for 1950 of the Research and Development Division of the Oberspreewerk is the development and construction of a high-speed cathode ray oscillograph. It is being carried out upon Russian orders and for delivery to Russia. During 1949, the division developed a cathode ray oscillograph with a writing speed of 50,000 km per second. The 1950 assignment requested construction of an oscillograph with a writing speed of 100,000km per second. Six such oscillographs have thus far been constructed. The Research and Development Division continues to work on the device for the purpose of improving it. The device is used for the recording of quickly changing events, but it works without amplifier, that is to say, its use is limited to those events where the voltage is so great that amplification is unnecessary. It cannot be used for the recording of events requiring amplification of voltage. [redacted] Russian interest in the device lies in the fact that it can be used for the recording and measuring of the statistical variations of radar impulses and of the "Flankensteilheit." The device allows the recording of events of up to ten billion Hertz; accordingly, the shortest time interval measurable is one ten-billionth of a second. But, 25X1 as pointed out above, this is possible only with those events where no amplification is required. The plant has never succeeded in recording events of more than ten million Hz. with amplification. Research on the problem of going beyond ten million Hz. with devices requiring amplification [redacted] is not carried out in the OSW for lack

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of experts and equipment. Construction of clystrons has been discontinued;
the plant formerly constructed them for the Russians.

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